

ABSTRACT OF THE DISCLOSURE

In a communications system having a modem pool for communicating via a communications channel, the modem pool including a plurality of modems and having a plurality A of NEXT cancellation filters, a) measuring NEXT impairment caused to at least one target modem among the plurality of modems by at least one disturber modem among the plurality of modems, b) allocating P filters among the A filters as probe filters, where $P \geq 1$, c) allocating at least one of the remaining $A-P$ filters among the filters to cancel NEXT from at least one disturber modem among the plurality of modems, and d) measuring, using at least one of the P probe filters, NEXT impairment caused to at least one target modem among the plurality of modems by at least one candidate disturber modem among the plurality of modems to which no $A-P$ filter is currently allocated.